AMENDMENTS TO THE CLAIMS

1. (Currently amended) A substrate processing apparatus for polishing a substrate, said substrate processing apparatus comprising:

a loading/unloading stage on which a cassette having a plurality of substrates is to be placed;

a polishing unit for polishing a substrate, said polishing unit including

(i) an edge-portion polisher for pressing a first polishing tape against an edge portion of ~~a~~ the substrate and ~~making a~~ causing relative movement between the first polishing tape and the substrate to polish the edge portion of the substrate; ~~and~~

(ii) a bevel-portion polisher for pressing a second polishing tape against a bevel portion of the substrate and ~~making a~~ causing relative movement between the second polishing tape and the substrate to polish the bevel portion of the substrate;

(iii) a notch polisher for pressing a third polishing tape against a notch formed in the substrate and causing relative movement between the third polishing tape and the substrate to polish the notch of the substrate, and

(iv) a cleaning device for conducting a primary cleaning of a polished substrate;

a transfer robot for transferring a substrate between a cassette, when on said loading/unloading stage, and said polishing unit; and

an air supply system for supplying air so that pressure of said loading/unloading stage is greater than pressure of said polishing unit.

Claims 2-4 (Cancelled)

5. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 1, wherein said edge-portion polisher includes two clamp members, and said edge portion polisher is structured to polish the edge-portion of the substrate by clamping upper and lower surfaces of the edge portion of the substrate through the first polishing tape by ~~a pair of~~ said two clamp members while the substrate is held and rotated by a substrate holding table.

6. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 5, wherein said two clamp members are movable in a radial direction of the substrate, when held by the substrate holding table, for adjusting a radial position of the edge portion to be polished by said edge-portion polisher.

7. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 5, wherein said edge-portion polisher further ~~comprises~~ includes a roller guide for guiding the first polishing tape radially outwardly of the substrate, when held by the substrate holding table, ~~to be polished~~ between said two clamp members, and for guiding the first polishing tape from one of said two clamp members toward the other of said two clamp members.

8. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 5, wherein said edge-portion polisher further ~~comprises~~ includes a mechanism for opening and closing

said two clamp members, with said two clamp members and said mechanism being vertically movable.

9. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 1, wherein said bevel-portion polisher includes a polishing head having a resilient member, and said bevel-portion polisher is structured to polish the ~~bevel-portion~~ bevel portion of the substrate by pressing the second polishing tape against the ~~bevel-portion~~ bevel portion of the substrate with ~~a~~ said polishing head ~~having a resilient member~~ while the substrate is held and rotated by a substrate holding table.

10. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 9, wherein said polishing head is movable in a radial direction of the substrate when held by the substrate holding table.

11. (Currently amended) ~~A~~ The substrate processing apparatus according to claim ~~3~~ 1, wherein said notch polisher includes a resilient member, and said notch polisher is structured to polish the notch of the substrate by pressing the third polishing tape against the notch in the substrate with ~~a~~ said resilient member and moving the third polishing tape while the substrate is held by a substrate holding table.

12. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 11, wherein said resilient member is vertically movable so that the third polishing tape is to be pressed against an upper edge, a radially outward edge, and a lower edge of the notch, selectively.

13. (Currently amended) ~~A~~ The substrate processing apparatus according to claim ~~2~~ 1, further comprising:

a cleaning unit for cleaning and drying the substrate after the substrate has been polished by said polishing unit and removed from said polishing unit.

14. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 1, further comprising:

an image sensor for imaging a region, being polished, of the substrate while the substrate is being polished; and

a controller for processing an image obtained by said image sensor to determine a polishing state of the region being polished.

15. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 14, wherein said controller ~~detects~~ is for detecting a polishing end point from the polishing state of the region being polished as determined by said controller.

16. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 1, further comprising:

a photosensor for applying light to a region, being polished, of the substrate and detecting light reflected by the region being polished, while the substrate is being polished; and

a controller for analyzing scattered light detected by said photosensor to determine a polishing state of the region being polished.

17. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 16, wherein said controller ~~detects~~ is for detecting a polishing end point from the polishing state of the region being polished as determined by said controller.

18. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 1, further comprising:

a controller for detecting a torque value to rotate the substrate, on a basis of a signal from a motor for rotating the substrate, while the substrate is being polished, and analyzing a change in the torque value.

19. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 18, wherein said controller ~~detects~~ is for detecting a polishing end point from the change in the torque value as analyzed by said controller.

20. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 1, further comprising:

a controller for detecting a torque value of a rotational shaft of a substrate holding table for holding and rotating the substrate while the substrate is being polished, and analyzing a change in the torque value.

21. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 20, wherein said controller ~~detects~~ is for detecting a polishing end point from the change in the torque value as analyzed by said controller.

22. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 1, further comprising:

a controller for measuring a tension applied to ~~the~~ one of the first, second and third polishing tapes which is held in sliding contact with ~~the~~ a region, being polished, of the substrate while the substrate is being polished, to determine a polishing state of the region being polished.

23. (Currently amended) ~~A~~ The substrate processing apparatus according to claim 22, further comprising:

a controller for measuring a tension applied to a portion of a member for pressing ~~the~~ one of the first, second and third polishing tapes against ~~the~~ a region, being polished, of the substrate while the substrate is being polished, to determine a polishing state of the region being polished.

Claims 24-51 (Cancelled)

52. (New) A method of polishing a substrate, said method comprising:

placing a cassette having a plurality of substrates on a loading/unloading stage;

transferring a substrate between ~~the~~ said cassette on the loading/unloading stage and a polishing unit;

pressing a first polishing tape against an edge portion of ~~a~~ said substrate and ~~making a~~ causing relative movement between ~~the~~ said first polishing tape and ~~the~~ said substrate to polish ~~the~~ said edge portion of ~~the~~ said substrate in ~~the~~ said polishing unit;

pressing a second polishing tape against a bevel portion of ~~the~~ said substrate and ~~making a~~ causing relative movement between ~~the~~ said second polishing tape and ~~the~~ said substrate to polish ~~the~~ said bevel portion of ~~the~~ said substrate in ~~the~~ said polishing unit;

pressing a third polishing tape against a notch formed in ~~the~~ said substrate and ~~making a~~ causing relative movement between ~~the~~ said third polishing tape and ~~the~~ said substrate to polish ~~the~~ said notch of ~~the~~ said substrate in the polishing unit;

conducting a primary cleaning of ~~a polished~~ said substrate in the polishing unit after said edge portion, bevel portion and notch of said substrate have been polished; and

supplying air so that pressure of ~~the~~ said loading/unloading stage is larger than pressure of ~~the~~ said polishing unit.